

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES**

In Re Application of: Nallur, et al.		Confirmation No.: 5317
Serial No.: 10/623,683		Group Art Unit: 2421
Filed: 07/21/2003		Examiner: Montoya, Oschta I.
For: <b>Seamless Transition Between Trick Modes</b>		Docket No.: 60374.0015US01/A-8378

**APPEAL BRIEF UNDER 37 C.F.R. §41.37**

Mail Stop Appeal Brief - Patents  
Commissioner of Patents and Trademarks  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

This is an appeal from the final Office Action mailed July 25, 2008, rejecting claims 1-40 and 42 in the present application and making the rejection FINAL.

**I. REAL PARTY IN INTEREST**

The real party in interest of the instant application is Scientific-Atlanta, Inc., having its principal place of business at 5030 Sugarloaf Parkway, Lawrenceville, GA 30044. Scientific-Atlanta, Inc., the assignee of record, is wholly owned by Cisco Systems, Inc.

**II. RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

**III. STATUS OF THE CLAIMS**

Claims 1-40 and 42 stand finally rejected by the Office Action mailed July 25, 2008, and are the subject of this appeal. Claim 41 was cancelled during prosecution. Further, a Notice of Panel Decision was mailed on January 14, 2009, which instructed that proceedings were to

continue to the Board of Patent Appeals and Interferences since at least one actual issue for appeal remains. Appellants appeal the FINAL rejection of claims 1-40 and 42.

#### **IV. STATUS OF AMENDMENTS**

There have been no claim amendments made after the final Office Action, and all amendments made before the final Office Action have been entered. The claim listing in section VIII CLAIMS – APPENDIX (below) represents the present state of the claims.

#### **V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

The claimed subject matter is summarized below with reference numerals and references to the written description (“specification”) and drawings. The subject matter, described in the following, appears in the original disclosure at least where indicated, and may further appear in other places within the original disclosure.

Embodiments of the claimed subject matter are illustrated in FIGs. 1-8 and are discussed in the specification at least at pages 3-16. Embodiments of the claimed subject matter, such as those defined by claim 1 define a method for providing a seamless transition between video play-back modes, comprising the steps of: storing a video stream in memory (see, e.g., page 13, lines 20-21); receiving a request for a trick mode operation (see, e.g., page 14, lines 25-26); responsive to receiving the request for a trick mode operation, using information provided by a video decoder to identify a first video picture to be decoded (see, e.g., page 14, lines 26-29); decoding the first video picture (see, e.g., page 15, lines 11-12); and outputting the first video picture to a display device (see, e.g., page 9, line 29 – page 10, line 2).

Embodiments of the claimed subject matter, such as those defined by claim 21 define a method comprising the steps of: receiving a first video stream from a video server, the video stream comprising a plurality of video pictures (see, e.g., page 15, lines 10-11); decoding a

current video picture from among the plurality of video pictures (see, e.g., page 15, lines 11-12); receiving user input requesting a trick-mode operation (see, e.g., page 15, lines 12-13); transmitting a value associated with the current video picture and information identifying the trick mode operation to the video server (see, e.g., page 15, lines 13-15); and receiving from the video server a second video stream configured to enable a seamless transition to the trick-mode operation (see, e.g., page 15, lines 16-18).

Embodiments of the claimed subject matter, such as those defined by claim 28 define a method for providing a seamless transition between video play-back modes, comprising the steps of: decoding a current video picture (see, e.g., page 14, lines 16-17; FIG. 6, step 602); parsing a stuffing transport packet (STP) to extract a time value corresponding to the current video picture (see, e.g., page 14, lines 17-19; FIG. 6, step 604); and storing the time value in memory (see, e.g., page 14, lines 19-20; FIG. 6, step 605).

Embodiments of the claimed subject matter, such as those defined by claim 35 define a system for providing a seamless transition between video play-back modes, comprising: a memory device for storing a video stream that includes a current video picture (see, e.g., page 13, lines 20-25; FIG. 2, hard disk 201); a processor in communication with the memory device (see, e.g., page 8, line 32 – page 9, line 2; FIG. 2, processor 244); and a video decoder in communication with the processor (see, e.g., page 14, lines 5-23; FIG. 2, 223 video decoder); and that is configured to: decode the current video picture (see, e.g., page 14, lines 16-17; FIG. 6, step 602), parse a stuffing transport packet (STP) to extract a time value corresponding to the current video picture (see, e.g., page 14, lines 17-19; FIG. 6, step 604), and store the time value (see, e.g., page 14, lines 19-20; FIG. 6, step 605).

Embodiments of the claimed subject matter, such as those defined by claim 42 define a set-top terminal (FIG. 2, STT 200) comprising: a processor (see, e.g., page 8, line 32 – page 9, line 2; FIG. 2, processor 244); memory storing program instructions thereon (see, e.g., page 10, lines 9-17; FIG. 2, memory 249); a storage device storing a compressed video stream (see,

e.g., page 13, lines 20-25; FIG. 2, hard disk 201); a decoder configured to: decode a compressed picture (see, e.g., page 14, lines 16-17; FIG. 6, step 602), responsive to a playback request; parse a stuffing transport packet (STP) to extract a time value corresponding to the decoded picture (see, e.g., page 14, lines 17-19; FIG. 6, step 604); and store the extracted time value corresponding to the decoded picture (see, e.g., page 14, lines 19-20; FIG. 6, step 605); wherein the processor is configured by the program instructions to: receive a user request for trick mode play of a compressed video stream (see, e.g., page 15, lines 12-13); responsive the user request for trick mode play, receive the stored time value from the decoder (see, e.g., page 14, lines 26-27); identify, based on the received time value, a picture location (see, e.g., page 14, lines 30-34); and retrieve a picture from the stored compressed video stream using the identified picture location (see, e.g., page 14, lines 33-35).

## **VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The following grounds of rejection are to be reviewed on appeal.

A. Claims 1-14 and 16-40 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by *Moeller* (U.S. Pat. No. 5,828,370).

B. Claim 42 stands rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by *Demas* (U.S. Pat. App. Pub. No. 2003/0093800).

C. Claim 15 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Moeller* (U.S. Pat. No. 5,828,370) in view of *Hallberg* (U.S. Pat. No. 7,027,713).

## **VII. ARGUMENT**

### **A. Rejection of Claims 1-14 and 16-40**

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721

F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(b).

Appellants respectfully submit that anticipation of the present invention is not established using the art of record. For at least the reasons set forth below, Appellants respectfully request that the Board of Patent Appeals overturn the final rejection of those claims.

### 1. Independent Claim 1

Claim 1 recites (with emphasis added):

A method for providing a seamless transition between video play-back modes, comprising the steps of:  
storing a video stream in memory;  
receiving a request for a trick mode operation;  
responsive to receiving the request for a trick mode operation,  
**using information provided by a video decoder to identify a first video picture to be decoded;**  
decoding the first video picture; and  
outputting the first video picture to a display device.

Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action (pages 3-4) alleges the following (emphasis added):

For Claim 1 *Moeller* teaches: a method for providing a seamless transition between video play-back modes, (Column 4 Lines 47-51) comprising the steps of: storing a video stream in memory (Col. 8 Lines 15-19); receiving a request for a trick mode operation (Col. 12 Lines 1-7); responsive to receiving the request for a trick mode operation (Col. 12 Lines 34-37), **using information provided by a video decoder to identify a first video picture to be decoded (Col. 3 Lines 9-13 and 21-23; and Fig. 5 Element 104 with Col. 9 Lines 31-35);** decoding the first video picture (Col. 13 Lines 9-14); and outputting the first video picture to a display device (Col. 4 Lines 22-26).

The final Office Action (page 3) further states:

In response to applicants' argument, on page 9, that Moeller fails to teach "using information provided by a video decoder to identify a first video picture to be decoded", applicants should note that Moeller teaches that the sequence header is required by the decoder in order to display the video sequence (Col. 3 lines 21-23). Also it is notoriously well known in the art that a decoder is needed in order to process a MPEG stream, as admitted by the applicants in the original specification (page 1, lines 23-28)

The emphasized citations of *Moeller* are reproduced below:

However, the MPEG-2 standard allows a sequence header to be transferred before any I frame or P frame. The sequence header includes information relevant to the video sequence, including the frame rate and picture size, among other information. (Col. 3, lines 9-13).

In step 104 the system of the present invention preferably analyzes timestamps within the stream. In the preferred embodiment where the stream is an MPEG stream, the system analyzes the presentation timestamps from the sequence headers in the stream. As mentioned above, the presentation timestamps are used to provide a time base for the video sequence. (Col. 9, lines 31-35; Fig. 5, Element 104).

As set forth in the response after non-final dated March 27, 2008, Appellants note that the allegation emphasized above from the final Office Action is inconsistent with the teachings of *Moeller*. *Moeller* discloses that sequence headers containing "information relevant to the video sequence" may be transferred under the MPEG-2 standard. (Col. 3, lines 9-13). Furthermore, *Moeller* discloses that "presentation timestamps" contained in the sequence headers may be analyzed to "provide a time base for the video sequence". (Col. 9, lines 31-35; Fig. 5, Element 104).

Even assuming that presentation timestamps contain information that is used "to identify a first video picture to be decoded", the presentation timestamps in *Moeller* are not "provided by a video decoder" as required by Claim 1. *Moeller* discloses that presentation timestamps are provided from a media server 50. This media server 50 is located remotely from the subscriber and is responsible for broadcasting to all respective subscribers. (6:32-54; FIG. 1, media server 50). The media server 50 may contain an MPEG decoder 74 (8:1-23). However, other than being listed as an *optional* feature of media server 50, the MPEG decoder 74 is not further

mentioned in the specification and is clearly described as not being necessary to perform the functions described in *Moeller*, much less provide it with specific information capable of identifying a first video picture as required by Claim 1.

Appellants respectfully submit that it is unreasonable to determine that the elements disclosed by *Moeller* teach using information provided by a video decoder to identify a first video picture to be decoded.

For at least these reasons, Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features, and respectfully request that the rejections under 35 U.S.C. § 102(b) be overturned.

Because independent claim 1 is allowable over *Moeller*, dependent claims 2-14 and 16-20 are allowable as a matter of law for at least the reason that claims 2-14 and 16-20 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

## 2. Independent Claim 21

Claim 21 recites (with emphasis added):

A method comprising the steps of:  
    receiving a first video stream from a video server, the video stream comprising a plurality of video pictures;  
    decoding a current video picture from among the plurality of video pictures;  
    receiving user input requesting a trick-mode operation;  
    transmitting a value associated with the current video picture and information identifying the trick mode operation to the video server; and  
    **receiving from the video server a second video stream configured to enable a seamless transition to the trick-mode operation.**

Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action (pages 7-8) alleges the following (emphasis added):

For Claim 21 Moeller teaches: A method comprising the steps of: receiving a first video stream from a video server, the video stream comprising a plurality of video pictures (Col. 12 Lines 26-32); decoding a current video picture from among the plurality of video pictures (Col. 7, Lines 4-11 with Col. 11 Lines 56-61, note displaying a streamed video through a set top box entails decoding a current video picture among a plurality of pictures); receiving user input requesting a trick-mode operation (Col. 12 Lines 1-7); transmitting a value associated with the current video picture and information identifying the trick mode operation to the video server (Col. 12 Lines 34-44); and **receiving from the video server a second video stream configured to enable a seamless transition to the trick-mode operation (Col. 3 Lines 34-51 with Col. 11 Lines 1-5).**

The final Office Action (page 2) further states:

In response to applicants' argument, on page 10 and 11, that Moeller fails to teach "receiving from a video server a second video stream configured to enable a seamless transition to the trick-mode operation", Moeller clearly teaches that the server outputs normal play streams and trick-play streams in order to enable a seamless transition to the trick-play operation (figure 6 and 8, Col. 3, lines 34-51 and Col. 11, lines 1-50).

The above-emphasized citations of *Moeller* are reproduced below:

**Trick Play Streams** – In an interactive video-on-demand (VOD) or near-video-on-demand (NVOD) system, it is greatly desirable for the user to be able to selectively fast forward and/or fast reverse through the movie being watched. Thus, some video-on-demand systems include fast forward and fast reverse streams, for each movie. When the user desires to fast forward or fast reverse through a movie, the user selects the fast forward or fast reverse option. The respective fast forward or fast reverse trick play stream is then transferred to the user at the appropriate point where the user was watching, instead of the normal play stream, thus simulating a fast forward or a fast reverse of the movie being watched. Thus a single video stream, such as a movie, is encoded at different presentation rates to enable the video file to operate in fast forward or fast reverse speed in additional to the normal play presentation rate.

**Indexing** – Interactive video-on-demand systems which include trick play systems require methods for indexing between the normal play stream and the trick play streams, as well as for indexing between the trick play streams (Col. 3, lines 34-51).

The index look-up tables for the trick play streams also allow the multimedia server 50 to transfer to and between equivalent positions of streams having different presentation rates, i.e., between normal play and trick play streams. (Col. 11, lines 1-5).



As set forth in the response after non-final dated March 27, 2008, Appellants note that the allegations in the final Office Action emphasized above is inconsistent with the teachings of *Moeller*. *Moeller* discloses that index look-up tables may allow for a transfer between normal play and trick play streams. The index look-up tables for normal and trick play streams are created by media server 50. (10:43-59). Appellants point out that the "index look-up tables" are not "video streams" as required by Claim 21. In fact, *Moeller* teaches away from embodying "index look-up tables" in a video stream. (11:17-23) ("The creation of the look-up table is independent of any particular type of video compression or MPEG representation. In the preferred embodiment where MPEG compression is used, the index look-up tables are created by scanning through the MPEG file...").

Appellants respectfully submit that it is unreasonable to determine that the elements disclosed by *Moeller* teach receiving from the video server a second video stream configured to enable a seamless transition to the trick-mode operation.

For at least these reasons, Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features, and respectfully request that the rejections under 35 U.S.C. § 102(b) be overturned.

Because independent claim 21 is allowable over *Moeller*, dependent claims 22-27 are allowable as a matter of law for at least the reason that claims 22-27 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

### 3. Independent Claim 28

Claim 28 recites (with emphasis added):

A method for providing a seamless transition between video play-back modes, comprising the steps of:  
    decoding a current video picture;  
    **parsing a stuffing transport packet (STP) to extract a time value corresponding to the current video picture;** and  
    storing the time value in memory.

Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action (page 9) alleges the following (emphasis added):

For Claim 28 *Moeller* teaches: a method for providing a seamless transition between video play-back modes (Col. 11 Lines 1-5), comprising the steps of: decoding a current video picture (Col. 7 Lines 4-11 with Col. 9 Lines 21-29, note the set top box taught by *Moeller* decompresses and displays a video stream); **parsing a stuffing transport packet (STP) comprising a time value corresponding to the current video picture (Col. 3 Lines 4-11 with Col. 9 Lines 31-37)**; and storing the time value in memory (Fig. 6 with Col. 9 Lines 52-57 with Col. 10 Lines 33-40 and Col. 13 Lines 9-14).

Appellants note that the Examiner did not address the exact claim language of Claim 28. In fact, for the element at issue, the Examiner cites to “parsing a stuffing transport packet (STP) comprising a time value corresponding to the current video picture”, while the actual claim element recites “parsing a stuffing transport packet (STP) to extract a time value corresponding to the current video picture”.

The final Office Action (pages 2-3) further states:

In response to applicants' argument, on page 12, that *Moeller* fails to teach “parsing a stuffing transport packet (STP) to extract a time value corresponding to the current video picture”, applicants should note that *Moeller* teaches that each picture or frame also includes a picture header which identifies the frame and includes information for that frame, also *Moeller* teaches sequence headers which includes presentation timestamps that identify the start of a video sequence (Col. 3, lines 3-33 and Col. 9, line 31-37).

The above-emphasized citations of *Moeller* are reproduced below:

Each picture or frame also includes a picture header which identifies the frame and includes information for that frame. The MPEG standard also includes sequence headers which identify the start of a video sequence. Sequence headers are only required once before the beginning of a video sequence. However, the MPEG-2 standard allows a sequence header to be transferred before any I frame or P frame. The sequence header includes information relevant

to the video sequence, including the frame rate and picture size, among other information. (Col. 3, lines 4-11).

In step 104 the system of the present invention preferably analyzes timestamps within the stream. In the preferred embodiment where the stream is an MPEG stream, the system analyzes the presentation timestamps from the sequence headers in the stream. As mentioned above, the presentation timestamps are used to provide a time base for the video sequence. (Col. 9, lines 31-37).

As set forth in the response after non-final dated March 27, 2008, Appellants note that the allegations of the final Office Action emphasized above are inconsistent with the teachings of *Moeller*. *Moeller* discloses that sequence headers containing "information relevant to the video sequence" may be transferred under the MPEG-2 standard. (Col. 3, lines 9-13). Furthermore, *Moeller* discloses that "presentation timestamps" contained in the sequence headers may be analyzed to "provide a time base for the video sequence". (Col. 9, lines 31-35; Fig. 5, Element 104).

The sequence headers taught by *Moeller* are not even transport packets, much less a "stuffing transport packet". Furthermore, the presentation timestamp of *Moeller* is not a time value that "corresponds to the **current video picture**" as required by Claim 28. Claim 28 requires that the current video picture is the current video picture decoded by the claimed method. Nowhere does *Moeller* disclose, teach, or suggest analyzing timestamps in conjunction with the decoding of a video picture. Thus, any time value that may be extracted from the presentation timestamp in *Moeller* does not necessarily correspond to a current decoded video picture.

Appellants respectfully submit that it is unreasonable to determine that the elements disclosed by *Moeller* teach parsing a stuffing transport packet (STP) to extract a time value corresponding to the current video picture.

For at least these reasons, Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features, and respectfully request that the rejections under 35 U.S.C. § 102(b) be overturned.

Because independent claim 28 is allowable over *Moeller*, dependent claims 29-34 are allowable as a matter of law for at least the reason that claims 29-34 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

#### 4. Independent Claim 35

Claim 35 recites (with emphasis added):

A system for providing a seamless transition between video play-back modes, comprising:  
a memory device for storing a video stream that includes a current video picture;  
a processor in communication with the memory device; and  
a video decoder in communication with the processor,  
and that is configured to:  
decode the current video picture,  
**parse a stuffing transport packet (STP) to extract a time value corresponding to the current video picture,** and  
store the time value in memory.

Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action (pages 10-11) contains overlapping rejections from claim 28 as to the above emphasized portions of claim 35.

As set forth in Section 3 above, to the extent there is similarity in claim features, Appellants note that the allegations emphasized above are inconsistent with the teachings of *Moeller*. Based on the arguments presented above, Appellants respectfully submit that it is unreasonable to allege that the elements disclosed by *Moeller* teach the capability to parse a stuffing transport packet (STP) to extract a time value corresponding to the current video picture.

For at least these reasons, Appellants respectfully submit that *Moeller* fails to disclose, teach, or suggest at least the above-emphasized claim features, and respectfully request that the rejections under 35 U.S.C. § 102(b) be overturned.

Because independent claim 35 is allowable over *Moeller*, dependent claims 36-40 are allowable as a matter of law for at least the reason that claims 36-40 contain all elements of their respective base claim. See, e.g., *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988).

## B. Rejection of Claim 42

It is axiomatic that “[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under consideration.” *W. L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983). Therefore, every claimed feature of the claimed invention must be represented in the applied reference to constitute a proper rejection under 35 U.S.C. § 102(e).

Appellants respectfully submit that anticipation of the present invention is not established using the art of record. For at least the reasons set forth below, Appellants respectfully request that the Board of Patent Appeals overturn the final rejection of those claims.

### 1. Independent Claim 42

Claim 42 recites (with emphasis added):

A set-top terminal comprising:  
a processor;  
memory storing program instructions thereon;  
a storage device storing a compressed video stream;  
a decoder configured to:  
decode a compressed picture, responsive to a  
playback request;  
parse a stuffing transport packet (STP) to extract a  
time value corresponding to the decoded picture; and  
store the extracted time value corresponding to the  
decoded picture;  
wherein the processor is configured by the program  
instructions to:

receive a user request for trick mode play of a compressed video stream;  
responsive to the user request for trick mode play, receive the stored time value from the decoder;  
identify, based on the received time value, a picture location; and  
retrieve a picture from the stored compressed video stream using the identified picture location.

Appellants respectfully submit that *Demas* fails to disclose, teach, or suggest at least the above-emphasized claim features. The final Office Action (pages 12-13) alleges the following (emphasis added):

Regarding claim 42, Demas discloses a set-top terminal comprising: a processor (paragraph 56, 61 and 65); memory storing program instructions thereon (Paragraph 65); a storage device storing a compressed video stream (paragraph 57-58 and 61-62); a decoder (200-figure 2) configured to: decode a compressed picture, responsive to a playback request (paragraph 42-44); **parse a stuffing transport packet (STP) to extract a time value corresponding to the decoded picture (paragraph 69)**; and store the extracted time value corresponding to the decoded picture (paragraph 76-77); wherein the processor is configured by the program instructions to: receive a user request for trick mode play of a compressed video stream (paragraph 65); responsive to the user request for trick mode play, receive the stored time value from the decoder (paragraph 72); identify, based on the received time value, a picture location (paragraph 69); and retrieve a picture from the stored compressed video stream using the identified picture location (paragraph 43, 47, and 114).

Appellants note that these citations comprise the entirety of the support and argument provided in the final Office Action in support of the rejection of Claim 42. The above emphasized textual citations of *Demas* are reproduced below:

FIG. 9 is a functional block diagram illustrating an embodiment of a transport stream (TS) decoding method 900 that is performed in accordance with certain aspects of the present invention. In a block 910, points within an MPEG TS are marked to allow for efficient decoding of the TS. The TS has one or more TS formatted command packets contained within it. Then, in a block 920, an entry point (EP) picture of the TS is calculated based on certain parameters of the TS. As shown in a block 925, certain of the parameters 925 may include parameters indicating a trick play mode 926, a current location 927, a

number of possible entry points 928, . . . , and any other parameter 929 that may be desired in a particular application). (Paragraph 69).

As set forth in the Remarks in Support of Pre-Appeal Brief Conference final dated October 27, 2008, Appellants note that the allegation emphasized above is inconsistent with the teachings of *Demas*. *Demas* discloses a “TS formatted control packet” with information capable of allowing the system to calculate an “entry point picture” of the transport stream. (Para. [0069]). The calculated “entry point picture” is not an extracted “time value corresponding to the decoded picture”. Instead, an “entry point” in *Demas* is a point in the stream that allows a picture to be efficiently decoded:

The decoder also needs to be able to maintain its real time display by limiting the data transferred to only those data that are required for building the pictures corresponding to the selected trick play mode. One way to achieve this is to mark certain entry points in the stream that would efficiently allow a complete picture to be decoded (as shown in block 910). The CPU could then compute the next entry point of the stream based on the current trick-play mode, its current location, and the set of possible entry points (as shown in the block 920). (*Demas*, Para. [0072]).

Based on the arguments presented above, Appellants respectfully submit that it is unreasonable to allege that the elements disclosed by *Demas* teach the capability to parse a stuffing transport packet (STP) to extract a time value corresponding to the current video picture.

For at least these reasons, Appellants respectfully submit that *Demas* fails to disclose, teach, or suggest at least the above-emphasized claim features, and respectfully request that the rejections under 35 U.S.C. § 102(e) be overturned.

### **C. Rejection of Dependent Claim 15**

As set forth above, independent claim 1 is allowable over *Moeller*. Appellants respectfully submit that *Hallberg* fails to remedy the above-described deficiencies of *Moeller*, and for at least these reasons, Appellants respectfully submit dependent claim 15 is allowable as a

matter of law for at least the reason that claim 15 contains all elements of its respective base claims. See, *e.g.*, *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellants respectfully request that the rejection under 35 U.S.C. § 103(a) be overturned.



#### **D. Conclusion**

For at least the reasons discussed above, Appellants respectfully request that the Examiner's final rejection of claims be overturned by the Board, and that the application be allowed to issue as a patent with pending claims.

In addition to the claims listed in Section VIII (CLAIMS – APPENDIX), Section IX (EVIDENCE – APPENDIX) included herein indicates that there is no additional evidence relied upon by this brief. Section X (RELATED PROCEEDINGS – APPENDIX) included herein indicates that there are no related proceedings.

Respectfully submitted,

Date: February 17, 2009

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### **VIII. CLAIMS – APPENDIX**

1. A method for providing a seamless transition between video play-back modes, comprising the steps of:
  - storing a video stream in memory;
  - receiving a request for a trick mode operation;
  - responsive to receiving the request for a trick mode operation, using information provided by a video decoder to identify a first video picture to be decoded;
  - decoding the first video picture; and
  - outputting the first video picture to a display device.
2. The method of claim 1, further comprising decoding and outputting a second video picture, wherein the first video picture and the second video picture are part of a group of pictures.
3. The method of claim 1, wherein the information provided by the video decoder is a time value that is associated with the first video picture.
4. The method of claim 1, wherein the first video picture is adjacent in display order to another video picture that was being output to the display device when the request for the trick mode operation was received.
5. The method of claim 1, wherein the video stream is received from a headend.
6. The method of claim 1, wherein the memory is a non-volatile memory.
7. The method of claim 1, further comprising storing information related to the video stream in memory.

8. The method of claim 7, wherein a demultiplexing system uses data embedded in the video stream to generate the information related to the video stream.
9. The method of claim 7, wherein the information related to the video stream comprises an index table.
10. The method of claim 9, wherein the index table identifies when each of a plurality of pictures within the video stream was stored in memory relative to a point in time.
11. The method of claim 10, wherein the point in time corresponds to when recording of the video stream commences.
12. The method of claim 9, wherein the index table associates time values with respective video pictures within the video stream.
13. The method of claim 9, wherein the index table associates values with respective video pictures within the video stream, the values being indicative of a display order of the pictures within the video stream.
14. The method of claim 9, wherein the index table identifies storage locations of respective picture start codes.
15. The method of claim 9, wherein the index table identifies picture types.
16. The method of claim 9, wherein the index table identifies storage locations of respective sequence headers.

17. The method of claim 1, wherein the trick mode operation is one of a fast play mode, a rewind mode, or a play mode.
18. The method of claim 1, wherein the information provided by the video decoder identifies a normal playback time required to reach the first video picture from a beginning of the video stream.
19. The method of claim 1, further comprising:  
examining information in an index table;  
examining annotation data corresponding to the video stream; and  
determining an entry point for fulfilling the trick mode request responsive to the annotation data and the information in the index table.
20. The method of claim 1, wherein the method is implemented by a television set-top terminal, and wherein the display device is a television.
21. A method comprising the steps of:  
receiving a first video stream from a video server, the video stream comprising a plurality of video pictures;  
decoding a current video picture from among the plurality of video pictures;  
receiving user input requesting a trick-mode operation;  
transmitting a value associated with the current video picture and information identifying the trick mode operation to the video server; and  
receiving from the video server a second video stream configured to enable a seamless transition to the trick-mode operation.
22. The method of claim 21, wherein the value associated with the current video picture is a time value.

23. The method of claim 22, wherein the time value is relative to a beginning of the first video stream.
24. The method of claim 21, wherein the value associated with the current video picture enables identification of a storage location corresponding to the video picture.
25. The method of claim 21, wherein the trick mode operation is one of a fast play mode, a rewind mode, or a play mode.
26. The method of claim 21, wherein:  
the method is implemented by a television set-top terminal; and  
the video server is located at a headend.
27. The method of claim 21, wherein one of the video pictures in the second video stream is temporally adjacent to the current video picture.
28. A method for providing a seamless transition between video play-back modes, comprising the steps of:  
decoding a current video picture;  
parsing a stuffing transport packet (STP) to extract a time value corresponding to the current video picture; and  
storing the time value in memory.
29. The method of claim 28, further comprising:  
using the time value to identify a location from which to begin a trick mode operation within a video presentation.
30. The method of claim 29, wherein the location corresponds to the current video picture.

31. The method of claim 29, wherein the location corresponds to a video picture that is adjacent in display order to the current video picture.
32. The method of claim 29, wherein the trick mode operation is one of a fast play mode, a rewind mode, or a play mode.
33. The method of claim 28, wherein the time value is correlated to a normal playtime from a beginning of a video stream to the current video picture.
34. The method of claim 28, wherein the method is implemented by a video decoder.
35. A system for providing a seamless transition between video play-back modes, comprising:
- a memory device for storing a video stream that includes a current video picture;
  - a processor in communication with the memory device; and
  - a video decoder in communication with the processor, and that is configured to:
    - decode the current video picture,
    - parse a stuffing transport packet (STP) to extract a time value corresponding to the current video picture, and
    - store the time value.
36. The system of claim 35, wherein the processor is programmed to use the time value to identify a location from which to begin a trick mode operation within a video presentation.
37. The system of claim 36, wherein the location corresponds to the current video picture.

38. The system of claim 36, wherein the location corresponds to a video picture that is adjacent in display order to the current video picture.
39. The system of claim 36, wherein the trick mode operation is one of a fast play mode, a rewind mode, or a play mode.
40. The system of claim 35, wherein the time value is correlated to a normal play-time from a beginning of the video stream to the current video picture.
42. A set-top terminal comprising:
- a processor;
  - memory storing program instructions thereon;
  - a storage device storing a compressed video stream;
  - a decoder configured to:
    - decode a compressed picture, responsive to a playback request;
    - parse a stuffing transport packet (STP) to extract a time value corresponding to the decoded picture; and
    - store the extracted time value corresponding to the decoded picture;
- wherein the processor is configured by the program instructions to:
- receive a user request for trick mode play of a compressed video stream;
  - responsive the user request for trick mode play, receive the stored time value from the decoder;
  - identify, based on the received time value, a picture location; and
  - retrieve a picture from the stored compressed video stream using the identified picture location.

**IX. EVIDENCE – APPENDIX**

None.



**X. RELATED PROCEEDINGS – APPENDIX**

None.